

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the Application:

Listing of Claims:

Claims 1-8: CANCELLED

9. (Currently Amended) A monitoring device for energy storage batteries comprising:
a device for measuring battery temperature; and
a computation device for determining the charge drawn by an energy storage battery starting from an initial state of charge at the start of the drawing of the charge;
wherein the computation device is designed to carry out a method comprising:
determining the charge drawn as a function of an exponential function ~~with a time constant and~~ of a charging time from the start of the drawing of the charge, wherein the exponential function includes a time constant is defined at least as a function of the energy storage battery type and of the temperature of the electrolyte measured by the device for measuring battery temperature.

10. CANCELLED

11. (Currently Amended) A computer program comprising:
computer program code designed to carry out a method when the computer program is run using a processor device, the method comprising:
determining the charge drawn by an energy storage battery as a function of an exponential function ~~with a time constant and~~ of a charging time from the start of the drawing of the charge, wherein the exponential function includes a time constant is defined at least as a function of the energy storage battery type and of the temperature of the electrolyte measured by a device for measuring battery temperature;
wherein the computer program is a program file stored on a data storage medium.

12. (Previously Presented) The monitoring device of Claim 9 wherein the time constant is also defined as a function of the state of charge at the start of the drawing of the charge.

13. (Currently Amended) The ~~monitoring device~~ program of Claim 11 wherein the time constant is also defined as a function of at least one of a charging voltage, a mean charging voltage and a rated charging voltage.

14. (Previously Presented) The monitoring device of Claim 9 wherein the method further comprises determining the absolute amount of charge drawn according to the function

$$\Delta Q \approx (1 - e^{-t/\tau}) (Q_0 - Q_s),$$

where ΔQ is the absolute amount of charge drawn, Q_0 is the defined rated capacity of the energy storage battery, and Q_s is the initial charge of the energy storage battery at the start of the drawing of the charge.

15. (Previously Presented) The monitoring device of Claim 9 wherein the method further comprises determining the relative state of charge of the energy storage battery with respect to the rated capacity of the energy storage battery according to the function:

$$Q(t)/Q_0 \approx 1 - (1 - Q_s/Q_0)^{-t/\tau}$$

where $Q(t)/Q_0$ is the relative state of charge of the energy storage battery, Q_0 is the rated capacity of the energy storage battery, and Q_s is the initial charge of the energy storage battery at the start of the drawing of the charge.

16. (Previously Presented) The monitoring device of Claim 9 wherein the method further comprises determining a first correction factor for the time constant, the first correction factor being determined using the formula:

$$\tau_T = a^{- (T_e - T_{e,0})/b}$$

where τ_T is the first correction factor, T_e is the electrolyte temperature of the energy storage battery, $T_{e,0}$ is a defined electrolyte nominal temperature, and a and b are constants.

17. (Previously Presented) The monitoring device of Claim 16 wherein the constant a has a value between 1.5 and 2.5 and the constant b has a value between 9 and 11.
18. (Previously Presented) The monitoring device of Claim 15 wherein the method further comprises determining a second correction factor for the time constant, the second correction factor having a value between 1 and $1 - Q_s/Q_0$.
19. (Previously Presented) The monitoring device of Claim 9 further comprising a computer program comprising computer program code designed to carry out the method when the computer program is run using a processor device.
20. (Previously Presented) The monitoring device of Claim 19 wherein the computer program is a program file stored on a data storage medium.